BOOK REVIEW

Electrical Conductivity in Ceramics & Glass, (Part A)

Edited by N. M. Tallan. Marcel Dekker Inc., New York 1974.

The present book is a welcome addition to the series *Ceramics & Glass: Science & Technology* edited by John B. Wachtman, Jr. of N.B.S., Washington, and is *intended as a text to help the advanced student in materials science to understand some of the more recent advances in the theory of electrical conductivity of ceramics and glass to help him in his own experimental studies.* The present volume consists of four chapters, each one written by active workers in this field. Chapter 1 written by D. Adler of M.I.T., deals with fundamental solid state theory as regards electrical transport (electronic and ionic) from the phenomenological and quantum mechanical view points. The second chapter, written by R. W. Blumenthal and M. A. Seitz, presents, in detail, the experimental techniques with all vital points which are important in the correct determinations of the type, concentration, mobility etc. of the conducting species. This chapter will be highly useful and informative for the experimental workers. Chapter three written by R. J. Brook gives an account of the microstructural aspects of the ceramic materials in terms of the nature and formation of point defects and discusses their interactions and role as ionic and electronic charge carriers. In the final chapter four, written by Wimmer and Bransky, the electronic conduction mechanism in ceramic materials has been considered in detail from the general conductivity concepts and the defect structure relationships. It is really quite fascinating to see the conductivity property of certain ceramic materials comparable to those of metals and semiconductors.

In view of the wide applications and tremendous potential importance of ceramics and glass in the development of modern science and technology, this book and particularly this series, will be of immense help to research workers as well as to advanced students in this specialized field of materials science. We eagerly await for the concluding part B of the present volume.

S. P. S. G.